PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Applicant:	David Wollan
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Examiner:	Vera Stulii
Title:	Alcohol Reduction in Beverages
Attorney Docket:	3029-000089/US/NP

Commissioner for Patents
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INFORMATION DISCLOSURE STATEMENT

I, David Wollan, disclose the following information about which I have personal knowledge, have been informed, or understand to be true.

1. I am the inventor named in this patent application. I am a director of Memstar Pty Ltd.

2. In May, 2007 Memstar dealcoholisation equipment operated by Memstar's Chilean licensee, Dimerco Ltda, according to the claimed method was used in a trial at Bodegas Esmeralda, La Agricola y Salentein SA Trivento, Argentina under the supervision of INV, the Argentinean wine regulatory authority. INV's representatives took away samples for analysis and the results were reported to Memstar's Argentinean representative, Gransud SA in the document dated 26/9/07 (marked "Exhibit 1"). The results in this document showed a drop in the isotope ratio $^{18}O/^{16}O$ that INV concluded showed that the process resulted in significant dilution of the product with water. On the basis of these results, INV refused to approve the equipment for use in Argentina, and advised Gransud of this orally.

3. Because I was not directly involved in the Argentinean trials, when I eventually saw the results I had serious reservations about the methods used. In particular I was concerned that a very large plant with a dead volume of 200-250 litres was used to treat a relatively small sample size of about 1,000 litres. Some mixing of water and wine on filling and emptying the machine would have been inevitable. This artifact of the trial procedure could in itself have led to a change in the isotope ratio $^{18}O/^{16}O$, without any movement of water across the perstraction membrane. Notwithstanding this possible error in the trial procedure, I believed that the drop in the isotope ratio $^{18}O/^{16}O$ did not demonstrate that the product was diluted with water during the dealcoholisation process itself, but instead was due to another cause. With this in mind, in late February 2008 I decided to repeat the isotope analysis but using wine, permeate, and water samples collected under more controlled conditions than the Argentinean trials. Samples were collected at different points in the process during the normal operation of one of our plants in

South Australia. Flow rates and alcohol concentrations were also measured so that appropriate mass balances could be calculated. Measurement of ^{18}O and ^{16}O concentration in the samples was carried out by the specialist laboratory of CSIRO, Australia's leading government research organization. CSIRO reported the ^{18}O and ^{16}O concentrations in the samples to me in a document dated 12 March 2008 (marked "Exhibit 2").

4. I used CSIRO's ^{18}O and ^{16}O concentration measurements to analyze water flow at the different points in the claimed method in the document "Report on isotope trials" (marked "Exhibit 3"). The ^{18}O concentrations measured by CSIRO showed that there was a transfer of $H_2{}^{18}O$ from the permeate (which is later re-introduced to the product in the method) into the strip water (which is discarded). As explained in the report, there is no significant net flow of water either way through the perstraction membrane. I concluded that the measured ^{18}O concentrations, particularly the increase in the strip water, could be more consistently explained by a preferential passage of $H_2{}^{18}O$ compared to $H_2{}^{16}O$ across the perstraction membrane from the permeate into the strip water and not vice versa.

5. Memstar brought these results to the attention of INV. As demonstrated by the line of emails from March 2010, a representative of INV admitted to Gransud that their measured $^{18}O/^{16}O$ did not demonstrate that the product was diluted in the method. In fact the concentrations of other wine components did not display changes consistent with their claimed dilution. Nevertheless, they were unable to change their approval process to account for what

was actually taking place in use of the Memstar equipment. It would be necessary to lobby for a change in the Argentinean regulations for Memstar to obtain approval of the equipment, an expense that could not be justified on a business level in view of the prospective amount of business in that country.

6. All statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true. I understand that willful false statements and the like if made herein would be punishable by fine or imprisonment, or both, under section 1001 of Title 18 of the United States Code, and may jeopardize the validity of the application or any patent issuing there from.

David Wollan

Date: March 14th, 2011